

REMARKS/ARGUMENTS

Reconsideration of the present application, as amended, is respectfully requested.

The December 21, 2009 Office Action and the Examiner's comments have been carefully considered. In response, an interview was conducted with Examiner Riley, claims are amended, and remarks are set forth below in a sincere effort to place the present application in form for allowance. The amendments are supported by the application as originally filed. Therefore, no new matter is added.

INTERVIEW

The courtesy of Examiner Marcus T. Riley in granting and conducting an interview in connection with this application is acknowledged and appreciated. The interview took place on June 11, 2010. Present at the interview were Examiner Riley and Applicant's attorney, Robert Michal. During the interview, the present invention was explained to the Examiner and proposed amendments to independent claim 21 were discussed. In addition, it was explained to the Examiner how the proposed amendments to independent claim 21 even more clearly define the claimed invention over the prior art of record. In view of the fact that the Examiner's supervisor was not present at the interview, no agreement was reached.

REJECTION UNDER 35 USC 103

In the Office Action, claims 21-28 are rejected under 35 USC 103 as being unpatentable over USP 6,104,498 (Shima et al.) in view of USP 6,788,430 (Emoto).

The Examiner's comments with regard to prior pending claim 21, as set forth on pages 4-7 of the Office Action are acknowledged. In view of the Examiner's comments, claim 21 is amended to even more clearly define over the prior art of record. Specifically, claim 21 is amended to include a limitation along the lines set forth in claim 22, but this limitation is broader than that recited in claim 22. As a result, claim 22 need not be amended in view of the limitation added to claim 21. Specifically, claim 21 is amended to recite that the receiving buffer management section controls a speed of the receiving processing based upon an amount of print data stored in the receiving buffer. Support for this amendment can be found in the application as originally filed at page 13, line 16 - page 18, line 7, inter alia.

In the present invention, the receiving buffer management section functions to manage the receiving buffer disposed in the predetermined area on the RAM. The receiving buffer management section monitors the amount of print data stored in the receiving buffer. Based upon the amount of print data stored in the receiving buffer, the receiving buffer management section informs various

processing sections, including the receiving section 11 and the auxiliary storage right section 15 that the data amount in the receiving buffer is of a certain value, and the receiving buffer management section changes the speed of the receiving processing. As a result of switching the speed of the receiving processing based upon an amount of print data stored in the receiving buffer, the data amount in the receiving buffer can be managed such that the time required for writing data to the receiving buffer is shortened. In this way, priority is controlled and when the real-time operating system is used, the number of task switches can be smaller than when the priority is not controlled, thereby reducing overhead associated with the task switch (see page 15, line 13 - page 16, line 20).

In rejecting claim 22, from which the limitation added to claim 21 is based, the Examiner cites Shima et al. and relies upon column 6, lines 47-63 and column 12, line 46 - column 13, line 47 for the rejection. Column 6, lines 47-63 of Shima et al. recite:

In the embodiment, a virtual storage system may be used to save intermediate print information in an external auxiliary storage 45 simply if the available memory capacity of a RAM 44 becomes small, as shown in FIG. 7, which shows that the RAM 44 and the auxiliary storage 45 are virtually one body when viewed from the controller 47 and intermediate print information is written into the virtual memory (storage) in sequence. Which of the RAM 44 and the auxiliary storage 45 the intermediate print information is to be saved in may be determined so that the data can be saved and consumed efficiently by considering the difference between the read time and the write time

caused by the difference between the RAM 44 and the auxiliary storage 45, the print information transfer rate from the host, the print information processing (print information analysis to print execution) speed at the printer, and any other factors. This topic will be discussed later.

While Shima et al. disclose that a determination is made as to which of the RAM 44 and the auxiliary storage 45 the intermediate print information is to be saved in is made so that the data is saved and consumed efficiently by considering a difference between the read time and the write time caused by the difference between the RAM 44 and the auxiliary storage 45, there is no disclosure, teaching or suggestion in this section of Shima et al. of controlling a speed of receiving processing based upon an amount of data stored in the receiving buffer. Instead, as stated in column 6 of Shima et al., any change is based upon the difference between the read time and the write time caused by the difference between the RAM 44 and the auxiliary storage 45. While Shima et al. teach at column 6, lines 56-63 that which of the RAM 44 and the auxiliary storage 45 the intermediate print information is to be saved in and consumed efficiently by considering the difference between the RAM 44 and the auxiliary storage 45, the print information transfer rate from the host, the print information processing (print information analysis to print execution) speed at the printer, and any other factors, there is no disclosure, teaching or suggestion of changing a speed of the

receiving processing based upon an amount of the print data stored in the receiving buffer. Shima et al.'s disclosure of "any other factors" is not a teaching of modifying a speed of the receiving processing based upon an amount of print data stored in the receiving buffer.

Column 12, line 46 - column 13, line 7 of Shima et al. recite:

When data is transmitted from the host 1, first the reception task 71 starts processing upon reception of the data at step T1, performs data reception processing at step T2, and stores the received data in the reception buffer 83, then transmits data at step T3. Control is transferred to another task. The reception buffer 83 is formed in a RAM 44 and an auxiliary storage 45 such as a hard disk drive. A storage management task 81 determines which of the RAM 44 and the auxiliary storage 45 the data is to be stored in. It determines which of the RAM 44 and the auxiliary storage 45 the data is to be saved in so that the data can be saved and consumed most efficiently by considering the difference between the read time and the write time caused by the difference between the RAM 44 and the auxiliary storage 45, the print information transfer rate from the host, the print information processing (print information analysis to print execution) speed at the printer, and any other factors, as described above. For example, if print processing is delayed and data remains in the RAM 44 on a whole, some data is stored in the auxiliary storage 45 and then read into the RAM 44 as required, whereby both of the RAM 44 and the auxiliary storage 45 are used efficiently.

Information concerning the storage locations of the data is written into a management table 82. The information in the management table 82 is transferred to the next task using the data. The storage management task 81 also manages the storage limit of the storage means as described above. If the storage means is about to reach the storage limit, the storage management task 81 informs, for example, the print management

task 74 of the fact, as described above.

This section of Shima et al. teaches that the storage management task 81 determines in which of the RAM 44 and the auxiliary storage 45 the data is to be stored so that the data can be saved and consumed most efficiently by construing the difference between the read time and the write time caused by the difference between the RAM 44 and the auxiliary storage 45, the print information transfer rate from the host, the print information processing (print information analysis to print execution) speed of the printer, and any other factors. This section of Shima et al. does not, however, disclose, teach or suggest controlling a speed of the receiving processing based upon an amount of print data stored in the receiving buffer. Nowhere does Shima et al. teach controlling a speed of receiving processing based upon an amount of print data stored in the receiving buffer. Instead, Shima et al. teach that there is a comparison between the RAM 44 and the auxiliary storage 45, not monitoring the amount of print data stored in the receiving buffer and then controlling a speed of receiving processing based thereon.

Neither Emoto, nor any other reference of record, discloses, teaches or suggests the limitation added to claim 21. Therefore, claim 21 and claim 27, which includes a limitation similar to that added to claim 21, are patentable over Shima et al., Emoto, and all

of the other references of record under 35 USC 102 as well as 35 USC 103.

Claims 22-26 and 28 are either directly or indirectly dependent on claims 21 or 27. Claims 22-26 and 28 are patentable over the references of record in view of their dependence on claims 21 or 27, and because the references do not disclose, teach or suggest each of the limitations set forth in the dependent claims.

In view of all of the foregoing, claims 21-28 are in form for immediate allowance, which action is earnestly solicited.

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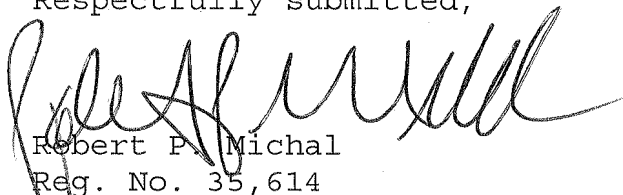
Entry of this Amendment, allowance of the claims and the passing of this application to issue are respectfully solicited.

If the Examiner disagrees with any of the foregoing, the Examiner is respectfully requested to point out where there is support for a contrary view.

Appln. Serial No. 10/800,213
Amendment dated June 21, 2010
Response to Office Action dated 12/21/2009

If the Examiner has any comments, questions, objections or recommendations, the Examiner is invited to telephone the undersigned at the telephone number given below for prompt action.

Respectfully submitted,



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